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SURVEY OF MOUNTAIN PINE BEETLE INFESTATION

ON THE KOOTENAI NATIONAL FOREST

1948

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SURVEY OF MOUNTAIN PINE BEETLE INFESTATION

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Survey of mountain pine beetle infestations on the Kootenai Forest was limited to only a few of the western white pine and lodgepole pine stands. Although the limitations of the survey are recognized, the reports received from local rangers indicate a fairly complete picture of the bark beetle situation on the Kootenai National Forest has been obtained.

In western white pine, a general decrease in infestation was noted. On two areas where infestations in lodgepole pine had been causing serious losses, control projects had reduced bark beetle activity to endemic status. However, an infestation at Upper Ford Ranger Station, first noted and reported in 1948, was found to have greatly increased since 1947. Brood in these trees indicated a potentially heavy increase may also be expected in 1949.

Data and comments on conditions in the various areas are given in the succeeding pages.

PETE CREEK UNIT

Infestation in western white pine on this unit is in an endemic status. Of the infested material observed on strip, two were windfalls, and only one was a standing tree. Losses from the same insect in lodgepole pine equalled those in white pine and were in the same endemic status. Equal losses per acre in Engelmann spruce windfalls will probably cause greater losses in that tree species in 1949, if they follow the usual pattern. Data for the unit is as follows:

Pete Creek Unit	Acreage 2,880
Acres of sample	134.0
Infested western white pine per acre	.022
" lodgepole " " "	.022
" Engelmann spruce " "	.022
Infested western white pine on unit	63
" lodgepole " " "	63
" Engelmann spruce " "	63

The major part of the light infestation remaining on this unit

was found in the area where it has been concentrated in the past, north of Beetle Creek.

SPREAD CREEK UNIT

Survey of this unit revealed the only mountain pine beetle infestation present on the unit was in windthrown trees. These windfalls amount to .153 of a tree per acre, are good host material, and the brood in them is a potential threat to the remainder of the western white pine.

Windthrown Engelmann spruce are infested with the Engelmann spruce beetle to the amount of .098 of a tree per acre. Much heavier losses may be expected in the Engelmann spruce in 1949 from the brood in these windfalls.

Windthrown pine and spruce give a total infestation of .251 of a tree per acre or 321 for the unit. The infestation in either species does not seem serious but the two combined could cause considerable depletion of the remaining stand. Data for the unit follows:

Spread Creek Unit	Acreage 1,280
Acres of sample	71.7
Infested western white pine per acre	.153 1/
" lodgepole " " "	.014
" Engelmann spruce " "	.098 1/
Infested western white pine on unit	196 1/
" lodgepole " " "	18
" Engelmann spruce " "	125 1/

1/Windfalls.

Engelmann spruce beetle infested windfalls usually contain such a heavy brood as to embody a serious threat to the remaining Engelmann spruce on the unit. If this threat is not removed, a more intensive examination is suggested in the summer of 1949.

MEADOW CREEK UNIT

Strip run on both the North and the South Forks of Meadow Creek failed to show any infestation of the mountain pine beetle.

FLEETWOOD CREEK (ZONOLITE) UNIT

Inspection of this unit failed to reveal any infested trees. The control work in the early part of the 1948 season seems to have completely controlled that outbreak.

HORSE LAKES UNIT

Infested trees on this unit showed a decided decrease due to the

control work in the spring of 1948. In 1947 there was an estimated 1.87 trees per acre. The 1948 survey indicated .203 of a tree and .15 of a windfall per acre. Furthermore, both the attacks and the brood were much lighter in 1948 than in 1947, which would indicate that the infestation is on the decrease. Data for the area is as follows:

Horse Lakes Unit		Acreage 1,100
Acres of sample		113.4
Infested lodgepole pine material per acre		.371
Standing trees	.203	
Windfalls	.150	
Stubs	.018	
Total infested material on unit		408
Standing trees	223	
Windfalls	165	
Stubs	20	

It is suggested that at least an inspection be made of this unit in 1949.

UPPER FORD UNIT

At the time the survey of the units of the Kootenai was begun, the presence of a few "bug-infested" lodgepole pine was reported in the yard of the Upper Ford Ranger Station. Inspection of the trees and vicinity indicated the need of an intensive survey. The survey was immediately undertaken. When completed it was found that about 3,000 acres supported an outbreak of an estimated 1,713 infested trees and windfalls. Brood in these trees is heavy and gives every indication that a decided increase could be expected in 1949. The data for the area is as follows:

Upper Ford Unit		Acreage 3,000
Acreage of sample		357.4
Infested lodgepole pine material per acre		.571
Standing trees	.554	
Windfalls	.017	
Infested lodgepole pine material on area		1713
Standing trees	1662	
Windfalls	51	

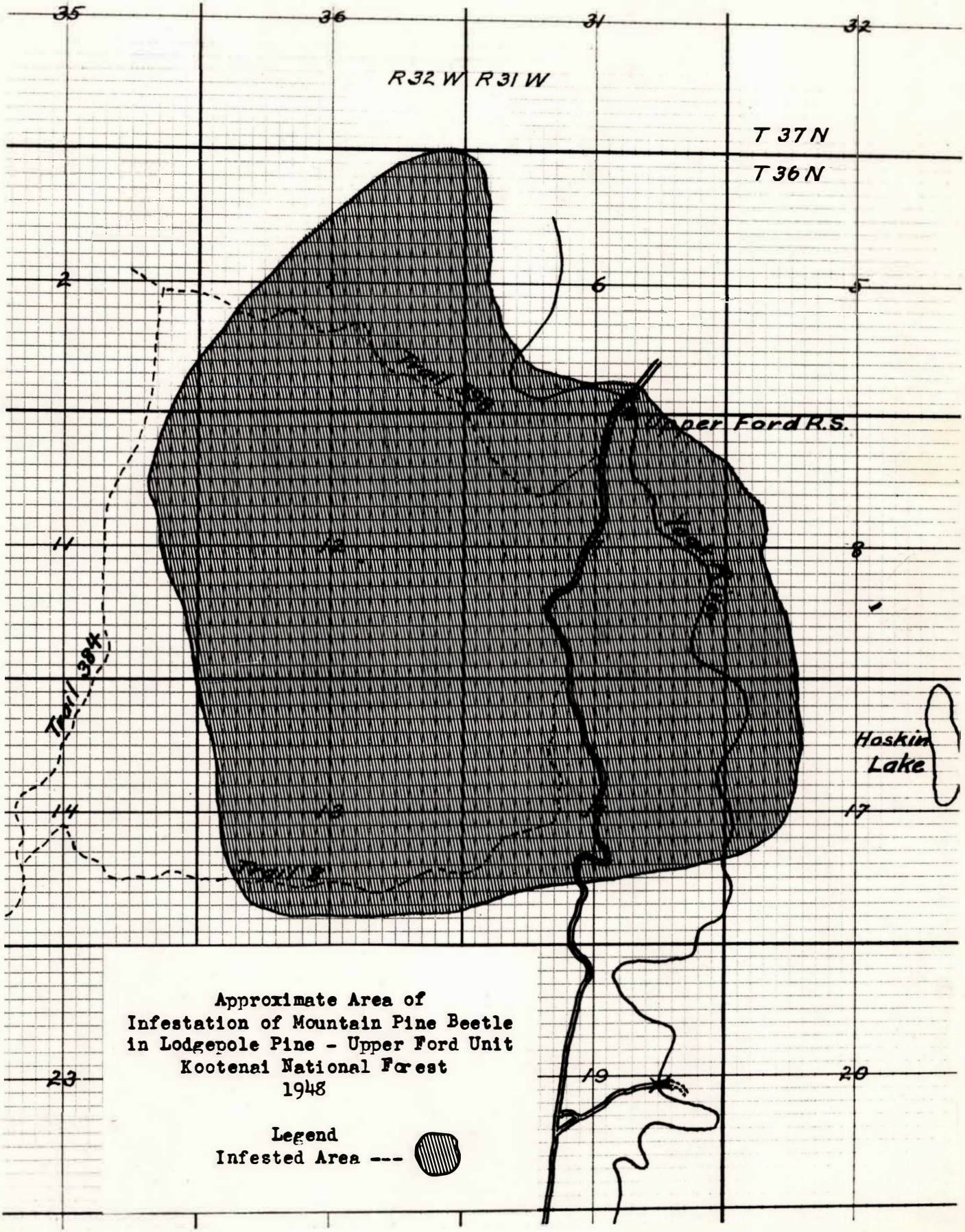
Most of the infestation is located on fairly easily traveled terrain that is accessible to established roads and trails. The exception to this condition is in the western edge of the infested area where the ground is rough, steep, and more remote.

A map attached to this report indicates the infested area and its relative location.

Locating the boundaries of this infestation involved a great deal of scouting of the surrounding country. The chance that the located infestation might be merely part of a larger one or that similar outbreaks might be present nearby, had to be considered. Although intensive examination of these adjoining and nearby areas was not possible with the time available, a sample of many of them was obtained. The drainages and areas extensively examined are given in the following list:

Caribou Creek
Blacktail Creek
N. Fk. of Yoak River
Basin - Porcupine Creek
Solo Joe - Hudson Creek
Bunker Hill Creek
Hoskin Lakes
Vinal Creek
Fish Lakes
West Sloper of Mt. Henry
Hensley Hill
Slim Creek
Lower Pete Creek
Garver Mountain
W. Fk. of Yoak River
Koo Koo Creek

In view of the increasing importance of lodgepole pine it is suggested that more extensive examinations be made of mature lodgepole pine stands on the Kootenai National Forest in 1949. An airplane flight over the forest should materially assist such a program by revealing any "hot spots" of infestation which may be developing and possibly reducing much of the ground work.



Approximate Area of Infestation of Mountain Pine Beetle in Lodgepole Pine - Upper Ford Unit Kootenai National Forest 1948

Legend
Infested Area ---